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TWO NEW TACHINIDAE (DIPTERA)

PARASITIC ON *POLYBIA* SPECIES (HYMENOPTERA)

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Through the courtesy of Mr. O. W. Richards of the Imperial College of Science and Technology, London, I have received for study two species of flies that are undoubtedly true parasites of two species of *Polybia*. Dipterous parasites of wasps are not known to be numerous and these are, I think, the first records from America. The flies of the family Metopiidae are not, so far as known, parasitic on the larvae of wasps and bees, but feed upon the food stored by the hymenopterous insects for the purpose of nourishing their young. In this latter case it is probable that the majority of the larvae of the bees and wasps die from hunger because these insects lay eggs, while the flies deposit living maggots and their offspring are well grown before the eggs of the hymenoptera hatch.

We are indebted to Mr. Richards for the privilege of retaining the types. Paratypes of both species have been returned to him and will be deposited in the British Museum of Natural History.

Telothyriosoma polybia, new species

Agrees with Townsend's description of *T. tersa* with the following exceptions: the antennae are blackish with the basal segments more or less reddish, there is a single pair of bristles below the base of the antennae, the abdominal pollen is whitish and the wing veins are broadly bordered with brown. Length, 8 to 10 mm.

Male.—Front about one-fourth as wide as one eye, slightly widening anteriorly, the frontal vitta brown, almost linear above, the parafrontals brassy yellow; frontals all more or less reclinate, the second and third pair from the vertex long and strong; a few hairs on the parafrontals; ocellars absent. Occiput yellowish pollinose on the upper half, white below, the pile pale yellowish; a single row of black occipital cilia. Cheeks about one-eighth the eye-height, with short, sparse black hair on the lower half. Face and cheeks white pollinose, the parafacials very narrow; three to five short bristles on the ridges above the vibrissae. Palpi reddish, slightly enlarged apically. Antennae blackish with the basal two segments more or less reddish; arista short pubescent. Eye with short, rather sparse hair.

Thorax black in ground color, thickly pollinose, the dorsum brassy yellow, the pleura mostly cinereous; mesonotum with four narrow black vittae; hair all

black. Acrosticals 3–2; dorsocentrals 3–2; posterior sublateral present; three pairs of marginal scutellars, the median pair weak; two sternopleurals; propleura bare, infrasquamal setulae absent; prosternum with pair of bristles and one or two pairs of hairs.

Legs blackish, the apices of the femora and the tibiae brownish red. Anterior tibiae with a single posterior bristle; middle tibiae with one antero-dorsal bristle; posterior tibiae with two posterodorsal and three anterodorsal bristles; claws and pulvilli long.

Wings cinereous hyaline, the veins broadly bordered with brown except on the basal fifth of the wing. Third vein with two or three bristles above and below at the base, apical cell narrowly open a little before the wing-tip.

Abdomen a little more than twice as long as wide, reddish yellow, a narrow median vitta, the apical half of the third and the whole of the fourth segment black. Second and third segments with narrow basal bands of thin white pollen, the fourth segment white pollinose with a dorsal triangle extending from the apex to the base; under side of third segment white pollinose. On the venter there is a narrow black line extending along the middle from near the base to the middle of the third segment; sternites concealed except at the base and apex of the abdomen. Genitalia blackish, mostly concealed. First and second segments with median marginals, the third and fourth with row. No discals.

Female.—Front almost half as wide as one eye, the frontal vitta somewhat wider and of more uniform width; four pairs of frontals and two pairs of proclinate orbitals; parafrontals white pollinose on the outer half; outer verticals half as long as verticals but weak. Claws and pulvilli shorter. Abdomen black except on the sides of the venter basally; pollen cinereous and much more extensive, leaving black apical bands on the apices of the second and third tergites and the sides of the first segment beneath, shining. In this sex the abdomen is shorter and less pointed and there are two posterior bristles on the anterior tibiae.

Types.—Holotype, male, allotype, female, and paratypes, three males and four females, Trinidad, Marine Club, December, 1934 (D. Vesey Fitzgerald) reared from larvae in nest of *Polybia rejecta* Fabricius. Pupation took place in the cells of the wasp nest. Emergence of the adults occurred between December 7 and 10.

Polybiophila, new genus

Differs from *Tachinophyto* Townsend by the absence of orbitals in the male, the absence of bristles on the lower fourth of the facial ridges and more elongate abdomen. Differs from *Lixophaga* Townsend by having only two pairs of presutural dorsocentrals.

Front of male three-fifths as wide as one eye; frontal vitta slightly narrower than parafrontal; nine pairs of frontals, the upper three reclinate; ocellars short and fine; outer verticals absent; cheeks one-sixth eye-height; face moderately retreating, the oral margin slightly produced; vibrissae level with oral margin, the ridges with two or three bristly hairs immediately above the vibrissae; middle of face moderately depressed and weakly carinate. Proboscis short; palpi clavate. Antennae arising slightly below the middle of the eyes; reaching the lowest sixth of the face; third segment slightly more than three times as long as the second, moderately narrow; arista thickened on the basal fourth and microscopically pubescent.

Acrosticals 3–3; dorsocentrals, 2–3; three intra-alars; posterior sublateral short and fine; pre-alar one-third as long as the following bristle; three pairs of marginal scutellars and usually a pair of apical hairs; one pair of discal scutellars; two sternopleurals; propleura bare; infrasquamal setulae absent; prosternum with a pair of bristly hairs.

Anterior tibiae with a single posterior bristle, the middle one with one antero-dorsal; posterior tibiae with a strong antero-dorsal and posterodorsal beyond the middle and three weak bristles on the basal half of these surfaces; claws and pulvilli elongate.

Wings cinereous hyaline; apical cell narrowly open a little before the wing-tip; third vein with two or three bristles basally. Squamae large.

Abdomen more than twice as long as wide, tapering on the posterior half; genital opening sub-triangular; first sternite with erect hair. First and second segments with median marginals, the third and fourth with row; second and third segments each with pair of discals, the fourth with one or two pairs on the apical third and several weak ones.

GENOTYPE.—*P. fitzgeraldi*, new species.

The genotype is parasitic on *Polybia* species.

Polybiophila fitzgeraldi, new species

Black with brassy yellowish pollen. Length, 5.5 to 6 mm.

MALE.—Head with brassy yellow pollen, the lower half of the occiput whitish. Parafrontals with scattered short black hairs; occipital pile pale yellow; cheeks with black hair over most of their area. Palpi reddish. Antennae black or brown.

Pollen on lower part of pleura cinereous; four mesonotal vittae, the outer pair broad and only obscurely interrupted at the suture, the inner pair narrow in front of the suture, greatly broadened behind, but not fused; scutellum brownish on almost the basal half.

Legs black, the trochanters more or less reddish; pulvilli grayish.

Wings cinereous hyaline. Squamae brownish yellow; halteres yellow.

Abdomen with the under surface more than half reddish, the pale color extending somewhat onto the dorsum of the first segment and forming large basal triangles on the second and third; second segment pale pollinose on the basal half in the middle, the pollen expanding to beyond the middle toward the sides. Pale pollinose fascia on the third segment occupying the basal two-fifths and of almost uniform width, that on the fourth occupying the basal half in the middle and strongly expanding to the apical fourth laterally. The pollen is obscure on the venter except on the fourth segment.

FEMALE.—Front about as wide as in male but with two orbitals on each side. Pollen on second and third abdominal segments not narrowed in the middle but more or less expanded at this point. Claws and pulvilli short.

TYPES.—Holotype, male, allotype, female, and two male paratypes, Mt. St. Benedict, Trinidad, April 5, 1933 (D. Vesey Fitzgerald).

The note accompanying the flies is as follows: "A number of fly larvae (very active) tumbled out of a nest of the wasp *Polybia occidentalis* (Olivier) [det. Bequaert] and wriggled about in a great hurry; ap-

parently they were ready to pupate. One was observed to emerge from a silken covered cell, in which was found the flabby remains of a wasp grub. The larvae readily burrowed into sand. April 6, 1933, several puparia found. April 19, 1933, adults emerging."